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ROLE OF AI IN BUSINESS

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Abstract: Artificial intelligence (AI) is a technical industry with far-reaching implications for enterprise and government. Some believe that a fifth technological revolution is on the horizon, with artificial intelligence as the driving force. Data science-driven algorithms would almost certainly hold the key to long-term plans and decisions in a wide range of markets. In corporate processes, such as strategic strategy, mergers and acquisitions, marketing, and product design, AI can play an increasingly important role. The organisational scope of AI is likely to include both practical and strategic aspect of industry.

AI instruments and results can be closely linked to issues such as product growth, business development, supply chain, customer behaviour, information technology, and many others. It benefits in many ways such as products and services are functional instruments rather than financial derivatives. If AI is implemented across business organisation one can find many of the benefits in initial days. As AI is one time investment and improving technology and will provide long term benefits in business organisations, it will provide a number of benefits in the long term. The use of AI in marketing is no different and will have a positive impact on the organisation.

Machines have been so intelligent that they can mimic more complicated tasks. Organizations must decide which capabilities to invest in, whether to create them in-house or procure them internationally. To achieve absolute AI, the first step is to use big data, the second is to apply analytics, and the third is to forecast. AI is being used by companies working in IT, marketing, banking, accounting, and distribution to improve their competitiveness and performance. It can be used to optimise customer experiences using chat bots or to better understand how to adapt content to specific users. Deep Learning technologies such as Generative Adversarial Networks (GANs) allow not only data analysis but also data synthesis.

Keywords: Technical industry, Artificial Intelligent, Business organization, Generative Adversarial Networks (GANs)

I INTRODUCTION

Technology is an essential part of our everyday lives in today's world. More goods are being developed to meet the demands of an increasing population, and the Internet is generating new services on a daily basis. However, in order to keep up with the rising demand, new technology needed to be developed in order to raise the rate of production while decreasing costs. The response was to automate tasks, and for many years robots performed routine tasks, displaced humans, and provided new and better jobs to replace the old ones. (Au-Yong-Oliveira, M. et. al. 2019). The ongoing technological transition is reshaping economies, undermining established economic structures, rendering conventional

businesses outdated, and causing social change and anxiety. In particular, the evolving digital field of big data that empowers AI is redefining certain fundamental concepts of organisational decision-making, with the ability to make companies easier and leaner, as well as change the general manager's duties. The recent AI boom and its applications in industry have been spurred by increasing computing resources, the processing of more abundant data, and the invention of sophisticated algorithms that aid in the making of complex predictive decisions. Canals, J., & Heukamp, F. (2020). We may describe AI as a branch of computer science that creates systems capable of performing tasks that involve human intelligence and adapting to various scenarios (oxforddictionaries). And if a large part of the population has

no idea what artificial intelligence is, they come into contact with it on a daily basis and it is not a strange concept to them. Automation and artificial intelligence (AI) have altered our way of living and are now more prevalent than ever in our everyday activities. Humanity is being increasingly reliant on emerging technology that can perform functions with minimal human intervention. Machines have taken on roles that were formerly performed solely by humans. While this is a great change in our everyday lives and will allow us to have more opportunities to do other things, it is becoming a major issue in the workplace that is being addressed by a number of experts.

Artificial Intelligence and its scope

According to Merriam-Webster, artificial intelligence is a division of computer science concerned with the modelling of intelligent behaviour and the ability of a system to mimic intelligent human behaviour (Forbes, 14 February 2018). AI theory has been in existence for several years, with its origins dating back to 1956 (Cohen and Feigenbaum 2014). It's a set of computational technologies that have come together to enable informed decision-making in a variety of circumstances and contexts (Tredinnick 2017). To put it another way, artificial intelligence (AI) is the simulation of human intelligence processes by computers, especially computer systems. Learning is the acquisition of knowledge and the principles for using the information, logic using rules to draw approximate or definitive conclusions, and self-correction are examples of these mechanisms. It can be said self-initiated adjustment or mending of errors and malfunctions (El Namaki, M. S. S. (2016).

AI can be traced back to 1950, when English polymath Alan Turing devised a test to see whether a computer could imitate human cognitive processes giving the world a glimpse into the possibilities that would become possible with the introduction of higher computational processing capacity (Batra et al. 2018).

Computers have improved their ability to execute high-level functions similar to humans, such as solving mathematical puzzles, operating cars, interpreting languages, and performing common sense reasoning, over time. Natural language processing (NLP), data extraction from large databases, proving mathematical hypotheses, automated programming, solving critical problems, and diagnosing diseases are only a few by the key skills required by an AI computer (Nilsson 2014). One of the most important reasons for this is data extraction. AI can only work by learning from a massive volume of existing data. Airbus, for example, used their AI system to analyse a production problem, measure a massive amount of data, and then propose a solution (Ransbotham et al. 2017).

AI encompasses a wide range of disciplines, including computation, mathematics, and records, as well as psychology, philosophy, and linguistics. Segmentation is a natural fit for the Artificial Intelligence principle. There are three types of segmentation: time, complexity, and genericity. Artificial intelligence (AI) is a strategic industry with far-reaching implications for enterprise and government. Some believe that a fifth technological revolution is on the horizon, with artificial intelligence as the driving force (El Namaki, M. S. S. (2016).

Machine Learning and AI

Since the 1990s, the majority of AI research has concentrated on machine learning approaches. Mitchell (1997) provides the most often used concept of Machine Learning: "A computer programme is said to learn from experience E with respect to some class of tasks T and performance test P, if its performance at tasks in T, as calculated by P, increases with experience E." Despite its distinct evolution, machine learning has become the dominant model in AI science and is commonly regarded as a subfield of AI (Goodfellow 2016).

Deep learning approaches that use multiple levels of representation traditionally applied using neural networks with multiple hidden layers, as well as the rise of big data and exponential development in computer hardware, are behind much of this advancement. Other machine learning approaches have learned from this trend as well, and their implementations have grown as a result.

AI in Business Organization

Over the last decade, AI has made significant advances in visual detection, voice synthesis, autonomous driving, and a variety of other functions that are usually known to demonstrate human intelligence. Over the last two decades, artificial intelligence (AI) has greatly changed areas such as biology, education, architecture, economics, and healthcare. Marketing is no different. Firm-consumer interactions are becoming more individualised and pervasive, resulting in highly digitised footprints. Companies are investing extensively in machine learning to improve their targeting skills as a result of the proliferation of data. AI agents operated by machine learning algorithms have shown their usefulness in analysing large-scale and unstructured data in real-time, making precise forecasts to aid marketing decisions, in these and a variety of other applications, such as social media mining, sentiment analysis, and customer churn prevention. Both facets of corporate success have significantly increased as a result of these measures (Ma, L., & Sun, B. (2020).

The organisational scope of AI is likely to include both practical and strategic aspect of industry. AI instruments and results can be closely linked to issues such as product growth,

business development, supply chain, customer behaviour, information technology, and many others. Data science-driven algorithms would almost certainly hold the key to long-term plans and decisions in a wide range of markets, from manufacturing and banking to education, health care, publishing, and retailing. (El Namaki, M. S. S. (2016). Brand reviews, personalised ads, essay grading, employee promotion and retention, risk ranking, image labelling, spam identification, cyber security defences, and a variety of other applications are all driven by algorithms. The widespread use of algorithmic decision-making has sparked a lot of curiosity and elicited a lot of reactions (along with a lot of "hype"), ranging from curiosity about how AI technologies can complement human decision-making and boost business to a lot of "hype." concerns about justice and ethics, concerns about work losses and economic inequality, and even speculations of a challenge to civilization And the word "artificial intelligence" has changed over time. Even the word "AI" has grown and come to mean various things to different people; it also encompasses not only machine learning, neural networks, and deep learning, but also a wide range of other analytics and data-related topics (part of the "AI is the new IT" phenomenon). Canals, J., & Heukamp, F. (2020)

Benifits of AI in Buisness

If AI is implemented across business organisation one can find many of the benefits in initial days. As AI is one time investment and improving technology and will provide long term benefuts in business organisations. It benefits in many ways such as products and services are functional instruments rather than financial derivatives. AI-derived algorithms can result in optimal function-fulfilling technologies and goods, supplanting current R&D outcomes. Time would be measured in a different way. The rapid advancement of AI would result in a new perspective on time and its calculation within a strategic context. The long time period in the past will most likely become a small time period in the future. The parameter is activities, not minutes and hours. Capitalism could operate in the absence of money. The vast capital accumulation seen during the third and fourth industrial revolutions might not be needed for the production of AI technologies. The composition of industries will change, and technical criteria will change. Within industries, AI can trigger both vertical and horizontal changes. El Namaki, M. S. S. (2016).

Management Applications of AI

In corporate processes, such as strategic strategy, mergers and acquisitions, marketing, and product design, AI can play an increasingly important role. When artificial intelligence (AI) gets more sophisticated and pervasive across businesses and sectors, its use in strategic planning may become more

common (Shrivastava et al. 2018; Spangler 1991). Planned strategy. Human decision-making is flawed, with cognitive errors and rationality discrepancies that may contribute to suboptimal outcomes. In decision-making, AI may be used in a multi-agent scheme to supplement the cognition of individuals or groups of people. The systems allow a human-agent team to perform cognitive tasks jointly better than human or software agents alone, particularly in high-stakes decision-making. The IBM cognitive space, which supports decimals, is an example of this. Strategic planning is a type of organisational management practise that involves establishing goals, focusing resources, strengthening activities, and evaluating and adjusting course as appropriate (Babafemi 2015).

For example, in sales and marketing, AI may calculate consumer sentiment and monitor purchasing patterns. Brands and marketers use the data to render ecommerce more user-friendly and to optimise specific promotions. Artificial intelligence (AI) will be used to build more customised interactions with prospects and consumers (André et al. 2018).

II AUTOMATING BUISNESS PROCESS

Automation emerged with a singular goal in mind: to enable computers to perform routine and monotonous tasks. This allowed people to move from low-skilled positions in the sector to medium and high-skilled jobs in services, and even within the same industry. However, introducing Artificial Intelligence into the mix complicates matters much more. Machines have been so intelligent that they can mimic more complicated tasks that most people would not believe were possible many years ago .(Au-Yong-Oliveira, M. et. al. 2019)

This modern AI environment includes more self-driving, intelligent machines that run algorithms fed by massive volumes of data, as well as a new generation of chatbots that communicate with humans. Machine Learning (ML), a subset of AI, has emerged as the most powerful general-purpose technology of our day, with significant consequences for the business world.

The exponential advancement of artificial intelligence is not only bringing new levels of automation to many enterprise processes. It is also changing sectors such as retail, apparel, and finance by using more data and deploying improved prediction capabilities, introducing innovative marketing and pricing tactics to approach the final client, and designing more effective business models. This ensures that many businesses will fall behind, and their infrastructure and skills will become redundant.

Artificial intelligence (AI) has advanced at a breakneck pace in recent years. From smart speakers and question-answering

chatbots to factory robotics and self-driving vehicles, AI-generated music, artwork, and perfumes, to game-playing and debating systems, the possibilities are endless.

We've seen AI evolve from a purely theoretical discipline to a functional method that's enabling a slew of new applications. Machine learning and other foundational AI subjects have record-breaking enrolment on university campuses, and AI-enabled technologies are now assisting physicians in detecting melanoma, recruiters in finding eligible applicants, and banks in deciding whom to lend a loan to. Canals, J., & Heukamp, F. (2020)

III INSIGHTS THROUGH AI

A better data environment with data governance, usage cases with market relevance, analytics techniques and software, process alignment, and an ambidextrous organisational culture are all needed for effective AI transformation (Chui 2017). Organizations must decide which capabilities to invest in, whether to create them in-house or procure them internationally, which platform and resources to use, and how to source and develop AI talent and skills as they continue to implement AI technologies in their business processes. The need to create a detailed plan is the first step in making this correct. (Canals, J., & Heukamp, F. (2020)

Without an enterprise strategy for — and with — info, there can be no enterprise strategy for or with AI. It's a must for machine learning and dynamic optimization to work. Organizations must engage in identifying which data will help their computers learn and which data will improve. The artificial intelligence of the enterprise is empowered by digital processes and networks that combine and interpret data that is siloed and distributed. A increasing number of legacy firms, as well as technology giants, are embracing robust data policies and activities. They use data as a commodity in a clear, brutal, and consistent manner. This distinguishes them both operationally and psychologically, as well as their technological prowess. They hire data wranglers, data analysts, and chief data officers to keep individuals and systems responsible for extracting value from data. The speed, accuracy, and reliability with which data trains machines is becoming increasingly important (Kiron, D., & Schrage, M. (2019).

To achieve absolute AI, the first step is to use big data, the second is to apply analytics, and the third step is to forecast. In order to analyse and make forecasts, AI needs data collection and storage. AI is being used by companies working in IT, marketing, banking, accounting, and distribution to improve their competitiveness and performance (Oana et al. 2017).

According to a new Forrester Report report, only one out of

every ten companies is actually insights driven (Hopkins et al. 2018). This suggests that an astounding 90% of companies are not currently deploying insights. According to the same report, 90 percent of all available data were not used for decision making . Around the same time, analysis indicates that businesses that base their decisions on data are more likely to experience 15% or higher year on year sales increase (Forrester 2016).

As a result, the economic advantages of transitioning to an AI-driven insights market are irresistible. A rethinking of the traditional Business Intelligence (BI) methodology is needed to accelerate such an evolution of data analytics. This method is turned into a closed loop structure in an insight-driven business: Step one is to Identify insights and rank them according to their importance; second is to integrate these insights into market users' everyday work environments, as well as the apps and software by which customers interact with the company; and last step is to implement an AI system to continually learn from the outcomes. Companies who use cutting-edge analytics, or as we want to term them, Augmented Intelligence Systems, see their data as assets, a digital "currency" that can be used to propel their industry forward and generate value for their stakeholders. They incorporate insights rather than just statistics into any decision made during the consumer life cycle. They also threaten their market room.

AI can be used to train models from unstructured data, allowing them to make more precise forecasts, make smarter decisions, and transform business processes. Organizations would be able to leverage these AI models to boost operating performance, make better decisions, and produce new goods and services quicker. An successful AI strategy starts with data, but it also necessitates investment in data science to link the AI models to the company's goals. The most notable advances in AI have come from supervised data-driven learning techniques. Canals, J., & Heukamp, F. (2020)

Amazon is a well-known case 20 years old. Its referral system – customers who purchased this often bought that – boosted consumer satisfaction dramatically and has become a major sales generator across the years. The path of AI is long and twisting. The highway For this future to become the current standard, data must understand its own significance as well as its historical importance. It transforms into Insights. This Insights must be activated so that they can quickly make their way to the best possible destination. As a result, insights become a company's nervous system. In the not-too-distant future, this nervous system will be an intellectual, self-aware software layer that will power any business. The majority of businesses are yet to embark on this trip, or are at best in pilot mode. Selz, D. (2020).

IV ENGAGING WITH PEOPLE

AI can be used to optimise customer experiences using chat bots or to better understand how to adapt content to specific users. AI would also play an important part in product design creativity. Deep Learning technologies such as Generative Adversarial Networks (GANs) allow not only data analysis but also data synthesis. As a consequence, we will learn from existing goods and use what we've learned and come up with fresh, original concepts. This AI capability is currently being used to create interactive artwork, such as art photographs and content for marketing campaigns. For realms as varied as fragrance design, early findings are already being realised (Goodwin et al. 2017;2018).

The movement toward using AI for generative activities will persist, making it critical for businesses to take advantage of it as an automatic capability or a platform to aid human imagination. AI can also be used in recruitment and hiring, handling job attrition, and maintaining employee development and retention in talent management systems. AI models will also be able to access data within the organisation to help workers develop expertise and pursue prospects for advancement within the enterprise.

Challenges Ahead

We've seen major advancements in AI in recent years, and we've arrived at a stage where AI is transitioning from a "narrow" state—where the technologies are based on a single role in a single domain—to the beginning of a "large" age of AI, where the technologies can be extended to a wide range of tasks. AI has a lot of potential in terms of assisting businesses with essential business operations like action development, product creation, promotion, and customer service. If corporate leaders seek to build and deploy more AI within their organisations, determining a roadmap for the specific use of AI to achieve their business goals, as well as developing a detailed AI strategy, is a crucial first step. The preparation for obtaining requisite AI skills, whether by external sourcing or internal growth, the system for assembling AI talent, and the availability and selection of the correctly labelled data needed to train the AI models are all critical components of the AI strategy. (Canals, J., & Heukamp, F. (2020)

Any of the most significant obstacles would be AI-based market efficiency mechanisms that listen to every conversation and convert speech to text, see every movement and compare it to a series of established behaviours, and recognise people without their permission (even if they are a single suspect amongst many). Although AI has a high degree of precision based on a large and complex data collection, it may still make errors, which are referred to in the literature as false negatives and false positives. Asymmetric results can

occur when people are subjected to errors caused by ill-defined algorithms.(Akter, S. et al 2020)

The primary reasons for AI adoption in these areas are economic, such as cost and time savings, improved efficiency and consumer loyalty, more reliable forecasts and decision making, and less so social (sustainability and wellbeing). Though economic drivers are reported in all industries, social drivers are only reported in agriculture and healthcare. Economic and technological obstacles to AI adoption include prohibitive deployment and maintenance costs, the need for support systems, a lack of usable data, concept non-reusability, and minimal applicability for certain classes of problems. However, equally relevant are Social obstacles, such as increased reliance on non-humans, work security worries, a lack of awareness and comprehension of possible advantages, protection concerns, a lack of confidence, and the difficulties of gaining various stakeholder viewpoints, are all significant. These social obstacles, on the other hand, are often framed as a lack of any ability (knowledge, trust) that, if properly maintained, can be overcome and the technology adopted by those who would need to use or be replaced by it (Cubric, M. (2020).

V CONCLUSION

We've seen major advancements in AI in recent years, and we've arrived at a stage where AI is transitioning from a "narrow" state to "large" age. Business has also seen drastic change in terms of using technology. Earlier which used to be business and technology has now turned into technology driven business. The cooperates are trying their best to acknowledge modern technology driven AI in their business in order to make it efficient. AI may be used to train models from unstructured data, allowing them to generate more exact forecasts, make wiser judgments, and alter corporate processes. Organizations would be able to exploit these AI models to increase operating performance, make better decisions, and generate new goods and services quicker. Everyone is aware of the benefits of AI in business, and everyone is aware of the best theta it can help in simplifying company management tasks. Business management may now take advantage of AI to efficiently take advantage of it and automate mundane tasks such as recruiting and data processing. This is assisting companies in developing time-bound contracts. The trend toward adopting AI for creative tasks will continue, making it vital for enterprises to use it as an autonomous capacity or a platform to support human creativity. AI may also be utilised in talent management systems to help with recruiting and hiring, job attrition, and employee development and retention. As a result of the abundance of data, businesses are heavily investing in machine learning to increase their targeting abilities. Machine learning algorithms have proven that AI agents can analyse

enormous amounts of unstructured data in real time and provide exact projections to improve marketing choices. The key drivers of AI adoption in these domains are economic, such as cost and time savings, increased efficiency and customer loyalty, and more accurate forecasting and decision-making, rather than social. All of these advantages are paving the way for AI to be used extensively in corporate management and institutions. There are issues, but they will be resolved in the near future on all paved routes.

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